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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/353,120	07/14/1999	LOUIS F. VILLAROSA JR.	061607-1100	3012

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EXAMINER

KUMAR, PANKAJ

ART UNIT

PAPER NUMBER

2631

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15

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/353,120

Applicant(s)

VILLAROSA ET AL.

Examiner

Pankaj Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-16, 19-22, 25 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 10, 16, 19-22, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 11-15, 25 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11, 12, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedberg USPN 5,526,361.

1. Regarding claim 11, Hedberg shows a method for detecting errors in the synchronization of a DTE data signal (Hedberg fig. 3: Din) with a DCE clocking signal (Hedberg fig. 3: CKout) in a communication environment wherein the DCE (Hedberg element where Ckout is going from fig. 3) interfaces the DTE (Hedberg element outputting Din which is input into fig. 3) to a communication channel, the method comprising the steps of:

a. providing a master clock signal (Hedberg fig. 3: CKin) deriving a DCE clocking signal (Hedberg fig. 3: CKout) and an internal clocking signal (Hedberg fig. 3: output of delta Ts) from said master clocking signal (Hedberg fig. 3: CKin), said internal clocking signal having the same frequency as the DCE clocking signal (Hedberg: Summary section including “ ... first combining means for combining the phase shifted signals in groups for obtaining a number of pulses with a length corresponding to the phase shift between the outputs of the corresponding group and the same frequency as that of the reference signal ... ”).

- b. obtaining a first sample of said DTE data signal at a first time a second sample of said DTE data signal at a second time, said second time being subsequent to said first time, the time interval between said first time and said second time being less than the period of the DCE clocking signal (Hedberg fig 3: 55 just rotates clock between 0 and 360 degrees. Suppose it rotates it 90 degrees, that means the clock will be shifted a little but the shift will be less than 1 period length.)
- c. comparing said first sample to said second sample and determining whether the DTE data signal has undergone a transition during the time interval between the first time and the second time. (Hedberg: for the remaining portions of the claim, see figs, 3, 3a, paragraph 20: "The output signals of D-flip-flops 70 and 72 are associated with A and C, respectively in FIG. 3a, whereas the output signal from the flip-flop 92 is associated with B. By carrying through these three readings and comparing them it is possible to see how the reading points are located in the "data eye". If the reading occurs too early, A will deviate from B, which results in the gate 74 emitting a signal implying that the clock phase should be increased. Correspondingly C will deviate at late reading resulting in the gate 76 emitting a signal implying that the clock phase should be decreased. ")

As per claim 12, the method of claim 11 wherein the interval between said first time and said second time is approximately $1/8$ of the period of the DCE clocking signal (Hedberg fig. 3: when element 55 rotates the clock by 90 degrees, the interval between the first time and second time will be $1/4$ of the period of the DCE clocking signal and $1/4$ is approximately $1/8$).

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As per claim 13, the method of claim 11, further comprising the step of generating a selector control signal if said first sample is different from said second sample (Hedberg: figs. 3, 3a, paragraph 20: "The output signals of D-flip-flops 70 and 72 are associated with A and C, respectively in FIG. 3a, whereas the output signal from the flip-flop 92 is associated with B. By carrying through these three readings and comparing them it is possible to see how the reading points are located in the "data eye". If the reading occurs too early, A will deviate from B, which results in the gate 74 emitting a signal implying that the clock phase should be increased. Correspondingly C will deviate at late reading resulting in the gate 76 emitting a signal implying that the clock phase should be decreased. ").

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14, 15, 25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hedberg.

4. As per claim 14, the method of claim 13, further comprising the steps of: inverting said circuit clocking signal to produce an inverted circuit clocking signal (Hedberg fig. 12: CK90 is an inversion of CK0 shifted by 90 degrees. If another shift of 90 degrees is made then this will be an inversion); and producing said internal clocking signal that is selected in response to said selector control signal, from the group consisting of said DCE clocking signal and said inverted

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clocking signal (not in Hedberg since Hedberg can choose DCE clocking signal, inverted clocking signal (i.e. shift of 180 degrees) or shift of 90 degrees; however, it would have been obvious to one skilled in the art at the time of the invention to modify Hedberg to only teach DCE clocking signal or inverted clocking signal since Lacking any criticality, to eliminate prior art parts (i.e. only keeping the 0 degree and 180 degree choice and removing the 90 degree choice) and its function does not make the claimed invention patentable over that prior art (In re Karlson, 153 USPQ 184). Also, lacking any criticality, changing the proportion of prior art parts (i.e. only have a 0 degree choice or a 180 degree choice and not a 90 degree choice) does not make the claimed invention patentable over that prior art (In re Reese, 129 USPQ 402). Also, lacking any criticality, changing the size or range (i.e. only have a 0 degree choice or a 180 degree choice and not a 90 degree choice) of the prior art parts does not make the claimed invention patentable over that prior art (In re Rose, 105 USPQ 237).)

5. As per claim 15, the method of claim 14 further comprising the step of latching said DTE data signal (Hedberg: inherent for the data to be latched in the flip flops)

6. As per claim 25, the method of claim 15 further comprising the step of performing said obtaining step and said latching step according to a time sequence referenced to said internal clocking signal (Hedberg fig. 3: flip flops obtain and latch the data according to internal clocks which are delayed).

7. As per claim 29, the method of claim 13, further comprising the steps of: inverting said internal clocking signal to produce an inverted circuit clocking signal; and producing said DCE clocking signal that is selected in response to said selector control signal, from the group

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consisting of said internal clocking signal and said inverted clocking signal. (discussed above under 103)

Allowable Subject Matter

8. Claims 1-7, 10, 16, 19-22, 27-28 are allowed.
9. See prior actions for details.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: USPN 5,768,283

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (703) 305-0194. The examiner can normally be reached on Monday through Thursday after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (703) 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

PK
April 15, 2003

TESFAL/EE/2/003/URE
PRIMARY EXAMINER